

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A generator-motor comprising:
a motor including a rotor and a stator and ~~attaining a function as a motor-generator~~having a drive mode and a power generation mode; and
a control device arranged on an end surface of said motor so as to surround a rotation shaft of said motor and controlling drive of said motor, wherein the control device controls the motor to function as a motor under the drive mode and as a generator under the power generation mode.
2. (Previously Presented) The generator-motor according to claim 1, wherein said control device includes
first, second and third electrode plates arranged so as to substantially form a U-shape to surround the rotation shaft of said motor, and
a polyphase switching element group controlling a current supplied to said stator,
said polyphase switching element group is constituted of a plurality of arms, a number of the arms corresponding to a number of phases of said motor, and each arm constituted of first and second switching elements,
said first electrode plate is arranged in a position apart from said rotation shaft by a prescribed distance in a direction perpendicular to said rotation shaft,
said second and third electrode plates are arranged outside said first electrode plate,
said first and second switching elements are connected electrically in series between said first electrode plate and said third electrode plate,
said plurality of first switching elements are arranged on said first electrode plate, and

said plurality of second switching elements are arranged on said second electrode plate.

3. (Previously Presented) The generator-motor according to claim 2, wherein said control device further includes a control circuit controlling said plurality of first and second switching elements, and

said control circuit is provided on a ceramic substrate arranged in a direction similar to an inplane direction of said first, second and third electrode plates in a substantially U-shaped notch.

4. (Previously Presented) The generator-motor according to claim 3, wherein said control device further includes a plurality of first wires connecting said control circuit to said plurality of first switching elements, and

a plurality of second wires connecting said control circuit to said plurality of second switching elements,

said plurality of first wires are arranged between said rotation shaft and said first electrode plate so as to surround said rotation shaft, and

said plurality of second wires are arranged between said rotation shaft and said first electrode plate and between said first electrode plate and said motor .

5. (Previously Presented) The generator-motor according to claim 4, wherein each of said plurality of first and second switching elements includes a control terminal receiving a control signal from said plurality of first wires or said plurality of second wires,

an input terminal receiving a direct current, and

an output terminal outputting a direct current in accordance with control contents by said control signal,

said input terminal of said first switching element is in contact with said first electrode plate,

said control terminal of said first switching element is arranged on a side of said rotation shaft and connected to said first wire,

said output terminal of said first switching element is arranged on a side of said second electrode plate and connected to said second electrode plate,

said input terminal of said second switching element is in contact with said second electrode plate,

said control terminal of said second switching element is arranged on a side of said rotation shaft and connected to said second wire, and

said output terminal of said second switching element is arranged on a side of said third electrode plate and connected to said third electrode plate.

6. (Previously Presented) The generator-motor according to claim 2, wherein said first and second electrode plates are arranged in a first plane, and said third electrode plate is arranged in a second plane different from said first plane.

7. (Previously Presented) The generator-motor according to claim 6, wherein said second plane is located closer to said motor than said first plane is.

8. (Previously Presented) The generator-motor according to claim 2, wherein said plurality of arms are radially arranged in the inplane direction of said first, second and third electrode plates .

9. (Previously Presented) The generator-motor according to claim 1, wherein said control device includes
first and second electrode plates arranged so as to substantially form a U-shape to surround the rotation shaft of said motor ,

a polyphase switching element group controlling a current supplied to said stator ,
and

a control circuit controlling said polyphase switching element group , and
said control circuit is provided on a ceramic substrate arranged in a direction similar
to an inplane direction of said first and second electrode plates in a substantially U-shaped
notch.

10. (Previously Presented) The generator-motor according to claim 9, wherein
said control circuit is resin-molded.

11. (Previously Presented) The generator-motor according to claim 9, wherein
said control device further includes a Zener diode protecting said polyphase switching
element group against surge, and
said Zener diode is arranged in said notch.

12. (Previously Presented) The generator-motor according to claim 9, wherein
said control device further includes a capacitive element smoothing a DC voltage
from a DC power supply and supplying the smoothed DC voltage to said polyphase
switching element group , and
said capacitive element is arranged between said ceramic substrate and said second
electrode plate .

13. (Previously Presented) The generator-motor according to claim 9, wherein
said control device further includes a field coil control unit controlling current feed to
a field coil different from said stator , and
said field coil control unit is arranged on said ceramic substrate .

14. (Previously Presented) The generator-motor according to claim 9, wherein
a leadframe continuing to said first and second electrode plates from said ceramic
substrate and said first and second electrode plates are arranged in an identical plane.